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| 10/599,066      | 09/19/2006  | Ludwig Brehm         | 1093-162PCT/US/RCE  | 3721             |

23869 7590 08/10/2011  
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| EXAMINER |
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GRABOWSKI, KYLE ROBERT

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| ART UNIT | PAPER NUMBER |
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3725

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08/10/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/599,066 | <b>Applicant(s)</b><br>BREHM ET AL. |  |
|                              | <b>Examiner</b><br>KYLE GRABOWSKI    | <b>Art Unit</b><br>3725             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 11-16, 18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-16, 18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/16/11</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. This is a non-final action in response to the RCE and claims filed on 05/16/11

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7, 11-16, 18, and 20-22, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no reasonable disclosure of specific length expansion coefficients or modulus of elasticity for any of the materials. Thus it is unclear what two materials can be used to satisfy the requirement that each has a length expansion coefficient or modulus of elasticity within a certain range (e.g. less than 5%). Further, because the "film element" actually comprises: a carrier film (may comprise PET or BOPP), a first lacquer layer (comprising a specific example composition Pg. 10, 20-26), metallization materials (a plurality of different metals), and an adhesive layer (comprising a specific example composition Pg. 12, 21-27), it is exceedingly unclear what the properties of the composite material actually are, as an

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exceeding large amount of combinations of materials are present. Lastly, the specific properties (length expansion coefficient and modulus of elasticity) of the sealing layer, further complicates a material properties comparison with the composite of materials above forming the "film element" (Pg. 14, 6-12).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7, 11-16, 18, and 20-22, are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are also unclear, as in addition to the fact that specific examples of material properties for comparison are not given, the "film element" actually contains many different elements which have different material properties. The independent claims, in regards to the physical structure of the "film element" and "sealing layer" only disclose particular properties of materials. One of ordinary skill in the art could not reasonably ascertain specific materials based on the Specification.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-7, 11-16, 18, and 20-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau (EP 1,398,174) in view of Cote et al. (US 2005/0040641).

9. In respect to claims 1, 4, 6-7, 14-16, 18, and 20-22, although the scope of the claims are impossible to ascertain, Moreau discloses a banknote comprising: a paper support 1; a film element 11 having optical security features 15; and a transparent sealing layer 14; the support 1 has window-shaped openings 2 (which may be through holes, 0009) which are closed by the film element 11 which projects beyond it on all sides; the sealing layer 14 covers the film element at least in the region of through holes 2 and is on the opposite side of paper support 1 to film element 11 (0027, Fig. 4).

10. Moreau does not disclose providing the lacquer layer (broadly synonymous with sealing layer) via a printing, scattering, sprinkling, or spraying method however, Cote et al. teach providing a protective layer lacquer layer comprising, for example, polypropylene (0044) which may be applied as coating of preferably 4 to about 8 microns (0043) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the lacquer layer taught in Moreau as a 4 to 8 micron thick polypropylene coating as taught in Cote et al. to provide a material and

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thickness that effectively acts as a barrier to chemical penetration (0043, Cote et al.).

Furthermore, the claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art (i.e. providing a sufficient thickness for desired properties is a technique within the purview of one of ordinary skill; similarly providing the lacquer layer through a printing operation is a known technique). The combination of Moreau and Cote et al. teach providing a sealing layer formed of a coating and applying it to cover a through hole on a substrate. This combination would result in the sealing layer engaging at least a portion of the cut edges and forming the inner surfaces of the through-hole and engaging the film element. This is due to the physical properties of the lacquer where the thick and viscous coating wraps into inner holes provided between indicia 14, which is analogous to the covered through holes each bearing significant changes in cross section (Fig. 9); Cote et al. specifically teach that the lacquer *fully encapsulates* the material to be protected (Col. 5, 54-61 & Abstract). Regardless, although product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

11. Moreau or Cote et al. do not disclose particular properties of the materials used.

Moreau does disclose that the film element may comprise PET or PC (having expansion

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coefficients of 33 and 39  $10^{-6}$  in/inF, respectively). Cote discloses that the sealing layer may comprise "polyester, polypropylene, polyethylene terephthalate, and mixtures thereof". These are all broad recitations of well known plastics, which in printed form will undoubtedly have properties in similar ranges to that of film PET or PC. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select any suitable mixture of the above plastics, which may contain the desired physical properties claimed, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

12. In respect to claim 2, Moreau further discloses that the second strip 10 (sealing layer) may be same size as the strip 3 (0023, Fig. 1). Note that the embodiment above in claim 1 incorporates elements of this embodiment (0027).

13. In respect to claim 3, Moreau substantially discloses the claimed subject matter for the reasons stated above including that the sealing layer may be larger than the film element (0023) but does not disclose the particular range of 100% to 120% larger. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a relatively larger sealing layer of 100% to 120%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.p. Furthermore, Figure 1 shows the sealing layer 10 only marginally larger than film element 3, so apparently just over 100% (i.e. not exceeding 120%).

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14. In respect to claim 5, Moreau discloses that optical security feature comprising printing (0015).

15. In respect to claims 14-16, Moreau discloses the claimed subject matter for the reasons stated above.

### ***Response to Arguments***

16. Applicant's arguments filed on 05/16/11 have been fully considered but they are not persuasive.

17. The applicant discussed how materials such as PP or PE, when printed versus in film extruded form, take on a plurality of different physical properties depending on "solvents, additives, catalysts, and/or hardeners". The examiner agrees, and it cannot be said that either Moreau or Cote explicitly disclose the material properties now claimed.

18. The claims are deemed both unclear and non-enabling, however. Even though the ratio is rather small (e.g. under 5% difference), between the claimed expansion coefficient and modulus of elasticity between the film element and sealing layer, there is a virtually infinite array of different materials, as well as particular compositions and additives (such as the solvents, additives, catalysts, and/or hardeners, discussed by the applicant) which alter properties of materials or material compositions. Because specification provides no support or evidence for particular properties of the exemplar materials, no determination can be made what materials fall under the scope of the

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claim. More perplexing, the "film element" is actually comprised of several different materials, including metals, which have vastly different expansion coefficients and modulus of elasticity.

19. Moreau states that PET or PC may provide the film but that "other materials known in the art are of course possible". Further, Cote et al. discloses many materials as well as "mixtures". It is unclear then how any obvious material choice (in the vast array of materials available to inventors) would teach away from Moreau or Cote et al. i.e. wherein materials having the claimed properties would be unsatisfactory.

### ***Conclusion***

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KYLE GRABOWSKI whose telephone number is (571)270-3518. The examiner can normally be reached on Monday-Thursday, 9am - 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571)272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyle Grabowski/  
Examiner, Art Unit 3725

/Dana Ross/  
Supervisory Patent Examiner, Art  
Unit 3725